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ABSTRACT

The study described in this report was launched in Fall 1978 at Bronx Community College (BCC) to determine the efficacy of two procedures for enhancing the academic survival and study skills of students in academic difficulty. Introductory material looks at BCC's Operation Second Chance (OSC), one of these treatment procedures, which employs peer-mediated contracts in self-management. Next, a literature review covers developmental approaches that focus on improving study behavior and self-modification. After the study's methods and procedures are discussed, the four experimental groups are described: (1) 18 students in a Probationary Workshop Program (PWP), which combines academic survival counseling, study skills advice, and information on stimulus control; (2) 20 OSC students who received the same treatment as the PWP group and were also involved in self-contracting; (3) 20 students who registered for but did not attend the PWP; and (4) 16 late-comers who did not participate. Next, the study's outcome measures are delineated, including evaluation interviews, the pre- and post-tests, and grades and credits earned. Study results are then presented, revealing that the treatment groups performed better than the non-treatment groups, but that the OSC group did not perform significantly better than the PWP group. The report concludes with a discussion of the importance of student motivation and of the implications of the findings. (AYC)

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Students on Academic Probation at Bronx Community College:

A Project in Peer-Mediated Self-Management Contracts.

Report II

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July 12, 1979

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Report II - Students on Academic Probation at Bronx Community College:
A Project in Peer-Mediated Self-Management Contracts.

A pilot project was launched in the Fall 1978 term as an experiment in differential approaches to help students in academic difficulty. This experiment investigated the efficacy of two treatment procedures for enhancing the academic survival skills and study skills of college students in academic difficulty. The two control groups were the (1) the non-contact control group (NCC), and (2) the no-treatment control group (NTC). The treatment groups were the (1) Probationary Workshop Program (PWP) group, and the (2) Operation Second Chance (OSC) group. The PWP group is an academic survival counseling + study skills advice + stimulus control group in which treatments were delivered through self-contained class sessions. The OSC group is an academic survival counseling + study skills advice + stimulus control + peer-mediated self-contracting group in which treatments were delivered via structured contacts in contract negotiations with student facilitators.

In terms of semester GPA, grade points earned and number of credit hours completed, it was predicted that the superiority on these measures would be statistically significant in favor of (1) PWP group $>$ NCC group, (2) OSC group $>$ NTC group, (3) PWP + OSC groups $>$ NCC + NTC groups, and (4) OSC group $>$ PWP group. The data clearly supported the three hypotheses but not the fourth. Both individually and combined, the PWP and OSC treatment groups were superior to the NCC and NTC control groups in improved grade points earned and number of credit hours completed but not with regard to semester GPA.

Studies such as ours have been criticized for their failure to match on motivation. It is argued that because of the interrecorrelations of motivation, aptitude and achievement, it is not possible to match counselees and controls on all three variables simultaneously. If they are matched on aptitude and achievement, the counseless must have higher motivation, and it is postulated that an inhibiting variable is operating to prevent their higher motivation from being revealed in performance. A dissonance theory explanation is used to suggest why counseling is more effective with self-selected counselees, how counseling effectiveness might be improved, and how it might be applied to students who do not spontaneously seek counseling.

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July 12, 1979

Introduction

Operation Second Chance is a peer-mediated contract in self-management procedure designed for students on academic suspension waivers (Santa Rita, E. 1979 a). Self-management is not to be confused with willpower. In the sense in which the term will be used in this article, behavioral self-management refers to (1) student engaging in activities through contingency contracting resulting in positive consequences and (2) enlisting significant others to praise, support and reinforce the student at appropriate times. In behavioral self-management, the emphasis is on what the student wishes to do to help her/himself. One ultimate advantage for learning this technique is that students develop alternate behavior patterns resulting in increased self-understanding and in greater competence and control over their own lives.

Contingency contracts state who does what, for how long, under what circumstances, and for what reward. Students should find contracts useful not only as motivators and verifiers of their self-agreements but also to clarify exactly what is expected by (1) coverting general goals into small, precise target behaviors relevant to the academic situation that the student can work on immediately, and (2) by monitoring and keeping systematic tract of current behavior that the student wishes to change.

Even with high motivation, the process of self-change is usually far from simple. Reinforcement with effective rewards is needed to encourage it. Enlisting others to reward her/himself is especially important to the student who because of a poor self-image may not perceive her/himself as an effective agent of self-change. Rewards from significant others may be more effective than the student's own reward system. In our self-management procedure, a witness signature is added to the contract as further motivation for the student to follow through; and the witness --the student facilitator --thus serves as a reinforcing agent.

Although self-managementholds promise as one of the best detailed behavior modification procedure, no controlled investigations of the effects of self-contracting procedure have been reported. Consistent with the need for a study of self-management procedures in general and peer-mediated self-contracting in particular, the present study compared self-contracting, study skills development, no-contact and no-treatment groups to test the improvement of academic survival skills and study skills of college students in academic difficulties.

Related Research

Cognitive and social-learning literature generally refers to the area of self-change as self-control, self-direction, self-management or self-instructional training. Studies in behavioral self-management in general includes approaches (1) to improve the student's study behavior and the (2) use of programmed instructional materials with an operant framework.

Study Behavior

Self-control approaches to improve student's academic performance received their impetus from Robinson's book, Effective Study (1970). McReynolds and Church (1973) evaluated Robinson's SQ3R study technique (survey, question, read, recite, review) with college undergraduates under therapist-administered conditions. The addition of self-contracting for study time did not significantly add to the effectiveness of the basic program, although both treatment conditions were superior to no treatment on self-reported study habits and number of credits hours earned. Differences on grade point average (GPA) were nonsignificant.

Beneke and Harris (1972) evaluated a comprehensive study skills manual for college students. Self-administered and therapist-administered conditions were found equally effective, and both groups had higher GPAs at the end of the term than did a no-treatment group. Unfortunately, only 9 of the 53 original subjects completed all the lessons, differences were not significant at follow-up, and the no-treatment group was composed of self-selected dropouts. Harris and Ream (1972) evaluated a modified version of the Beneke and Harris (1972) program for high school students. This study, which was also plagued by dropout and follow-through problems, found no differences between therapist-administered and no-treatment conditions.

Allen (1973) investigated the effectiveness of a study-counseling manual for college students in a well-controlled experiment. He found no differences on outcome measures between minimal-contact and therapist-administered groups, although minimal-contact subjects completed less of the program than did subjects with high therapist contact. The combined treatment groups were more improved than a no-treatment group on a number of self-report and performance measures. A relaxation program did not significantly add to observed treatment effects.

Richardson has developed a test anxiety program that combines a self-study manual with videotapes and computer-guided practice tests. The entire

program can be self-administered and only requires a secretary to instruct students in the mechanics of video-tape-deck and computer operation. Evaluation of the program have been mixed (Richardson, O'Neil, Grant, and Judd, 1973).

Cesa (1974) studied the efficacy of a brief self-help manual with junior college students. Although a self-reinforcement component was not found to increase the effectiveness of the basic self-monitoring package, it did lead to the greatest number of follow-through problems. Furthermore, manual groups were not superior to a placebo control group on any measure. The implication of these results for clinical populations is unclear, since subjects were average students participating in a mandatory class experiment, rather than underachievers volunteering for treatment.

The most extensive work with behavioral bibliotherapy for study skills has been conducted under minimal-contact conditions by Richards and his colleagues (see Groveman, Richards, & Caple, 1975). An initial study (Richards, 1975) demonstrated that a basic program modeled after Robinson's (1970) SQ3R method was superior to no treatment. This finding has been replicated in two other experiments (Richards, McReynolds, Holt, & Sexton, 1976; Richards, Perri, & Gortney, 1976). Stimulus-control (Richards, 1975) and self-consequation procedures (Richards, McReynolds, Holt, & Sexton, 1976) do not appear to add to the effectiveness of the basic program, but supplemental self-monitoring components do (Richards, 1975; Richards, McReynolds, Holt, & Sexton, 1976). Although a number of self-monitoring procedures have been investigated, they all appear to produce equivalent results (Richards, McReynolds, Holt, & Sexton, 1976; Richards, Perri, & Gortney, 1976).

Richards' research has also demonstrated that college students who were initially uninformed about their study habits benefited significantly more from self-monitoring than did those already knowledgeable about their study behavior (Richards, McReynolds, Holt, & Sexton, 1976; Richards, Perri, & Gortney, 1976). Finally, Richards, Perri, and Gortney (1976) found that subjects who received faded therapist contact during treatment were superior at follow-up to subjects with steady therapist contact.

Investigators of self-help study skills programs have evaluated their techniques with a wide variety of client populations and therapeutic conditions. These programs are largely based on Robinson's (1970) SQ3R system and can successfully be undertaken with little or no therapist contact (Allen, 1973; Richards, 1976; Richardson et al., 1973). Behaviorally oriented consequation procedures

(Cesa, 1974; McReynolds & Church, 1973; Richards, McReynolds, Holt, & Sexton, 1976), relaxation training (Allen, 1973), and stimulus-control procedures (Richards, 1975) have failed to produce incremental improvements over the basic program. The one added component that has been found useful is self-monitoring (Richards, 1976).

Areas most in need of attention in future research are the high attrition rate (Beneke & Harris, 1972; Harris & Ream, 1972) and poor compliance with therapeutic procedures (Allen, 1973; Cesa, 1974; McReynolds & Church, 1973) noted by previous investigators. In this regard, subject characteristics may prove important, as demonstrated by the differential efficacy of self-monitoring for informed students (Richards, McReynolds, Holt, & Sexton, 1976; Richards, Perri, & Gortney, 1976). Further matching of treatment procedures to specific subject deficits may help to maintain subjects' follow-through by providing procedures most relevant to individual needs.

General Instructional Materials

In addition to programs for specific targeted behavior problems, more general self-help texts (Flanders, 1976; Foster, 1974; Mahoney & Thoresen, 1974; Robbins & Fisher, 1973; D. L. Watson & Tharp, 1972) have been written. These programs most often teach the reader to (a) specify a behavior requiring change, (b) set goals and develop a self-change contract, (c) self-monitor the target behavior's frequency of occurrence and (d) rearrange relevant antecedents and consequences within an operant framework. On occasion, additional procedures such as systematic desensitization, modeling techniques, or interpersonal skills training are discussed (e.g., Flanders, 1976; D. L. Watson & Tharp, 1972).

Courses in which students have conducted self-modification projects have often used general instructional materials (Bakker & Armstrong, 1976; Barrera & Glasgow, 1976; McGaghie, Menges, & Dobroski, 1976). The most widely used text in such courses has been that of D. L. Watson and Tharp (1972), for which case studies on self-modification projects have been reported (Kau & Fischer, 1974; Tharp, Watson, & Kaya, 1974).

McGaghie and Menges (1975) and McGaghie, Menges, and Dobroski (1976) used D. L. Watson and Tharp's (1972) book as an instructional text in undergraduate educational psychology classes. Although personal consultation was available from the instructors, students generally conducted their projects with little guidance. Most frequent among the students' targeted behaviors were study habits, physical exercise, smoking, and weight reduction. Goal-

attainment scaling (Kiresuk & Sherman, 1968) was used to specify objectives for each student's project and to measure outcomes in relation to these objectives. Outcome data showed that over 70% of the participants judged their projects to be successful.

Barrera and Glasgow (1976) used D. L. Watson and Tharp's (1972) book to help students in a self-modification course set up individualized programs. Targeted problems were similar to those reported by McGaghie, Menges, and Dobroski (1976). Seventeen of the 20 students who completed the course were judged to be satisfied with their program's outcome. On 3-month follow-up, to which 19 of the 20 students responded, 83% of the students rated their target behaviors as either further improved or about the same, relative to the end of the course. Ninety-five percent were extremely or moderately confident that self-modification skills could be generalized to other behaviors.

Future self-modification courses can provide settings to evaluate a number of issues more carefully. With the exception of D. L. Watson and Tharp (1972), general instructional materials have not been validated in any systematic manner. No published text has been adequately tested under self-administered or minimal-contact conditions, and studies employing placebo and no-treatment control groups have not been reported. It also remains unclear when general texts are preferable to more focused manuals that deal with single problem areas. And finally, although texts like that of D. L. Watson and Tharp (1972) are probably useful, it remains uncertain when they are necessary, or to what extent they contribute to the success of classroom self-modification projects. Thus, Schallow (1975) held class discussions that paralleled the D. L. Watson and Tharp (1972) book, but the actual text was not reported to have been used. Although only 14 of 45 students evidenced significant change, as indicated by time-series analyses of self-monitoring data, even the least successful subjects had mean project ratings greater than "moderately successful." Other investigators have reported teaching successful self-modification projects in which only brief instructional handouts or no supplemental texts were used (e.g., Mencke, 1973). It would appear that further work is needed to clarify when general instructional texts facilitate self-directed change.

Method

Subjects

Ss were 74 undergraduate students at Bronx Community College. Students on academic probation were "required" to attend PWP sessions on the basis of the need to improve their academic standing and raise their cumulative GPAs to

to the required retention standard. Students on academic suspension waivers were allowed to continue their semester studies provided they attend thursday sessions for a battery of diagnostic testing. Ss were chosen with the intention of including only students with 36+ cumulative credits completed and a cumulative GPA below 2.00. No student who indicated that or she would take less than a full course load of 12 credits hours during the semester participated. Five students from the PWP group were excluded from subsequent analysis; 3 will have completed less than 36+ cumulative credits by the end of the semester and two were carrying less than a full course load of 12 credits.

Procedure

Allocation and Scheduling. 38 Ss signed up for a Probationary Workshop Program scheduled on a Tuesday for total of seven sessions. Eighteen students actually showed up and these students completed the seven sessions. Twenty students signed up but did not show up for the PWP sessions.

Thirty-six Ss signed up for Operation Second Chance. These students were on academic suspension waivers who volunteered in response to an invitation to participate in a special project offered by BCC's Department of Student Development. Twenty students reported for a rigorous program in self-management procedure for a total of 8 sessions. Sixteen students reported late when Operation Second Chance was already underway and were told that they could not participate.

Treatment. Peer-mediators were student facilitators recruited to provide students in Operation Second Chance with a structured system of learning academic survival skills and study skills during a series of close and intensive counseling encounters.

In order to achieve the goals of Operation Second Chance, it was important for us to make decisions concerning the kinds of student who would become student facilitators, the nature and substance of their training and supervision, and finally the degree of structure contract-negotiation procedures used by our student facilitators would have. In reviewing the literature on paraprofessional counseling, we identified several important variables that were pertinent to our needs (Santa Rita, E. , 1979 c). Student facilitator selection was one. We were concerned with the academic improvement of students. Our screening of potential student facilitators therefore stressed academic ability. We also focused on attitudes and sense of responsibility, the ability to follow instructions, flexibility and the ability to work under adverse conditions in establishing our selection criteria.

Honor role students (Phi Theta Kappans) were the source of interested student facilitators. Observed under normal group circumstances, the majority of these students appeared to be outgoing and assertive when interacting with their peers. From the original volunteer group of 9 students, 4 were chosen as student facilitators to work, each with a caseload of 5 student participants in Operation Second Chance.

Although volunteers with informal training and supervision have been found successful, we followed evidence that formal training of student facilitators and close supervision are advantageous. Other authors have suggested that a significant factor in successful training programs is the teaching of rules for model-prescribed counselor behavior adapted from the

principles and practices of counseling psychology. "Avoid negative verbal statements " and "students are likely to repeat behavior that is rewarded" were the kind of concepts we felt were important to emphasize with our student facilitators.

The student facilitators attended a total of 8 weekly training sessions: two preorientation sessions with this counselor and 6 sessions occurred concurrent with counseling contacts with students in Operation Second Chance. We felt that the student facilitators better understand the relevance of self-management principles and positive reinforcement under an operant framework. We wanted this experiential learning to take place. We observed most peer mediators at least once during contract negotiation. The purpose of this was to give each student facilitator supervision and suggestions on positive feedback. They were to learn to implement the rule, "reinforce rather than punish." Once the student facilitator had experienced the reinforcement rule, we felt it was necessary to state the rule and define all the separate concepts related to it. For example, we said that "punishing means making a student feel bad about something that hasn't been done well" and "'feedback'" occurs when you inform a student about the quality of some performance without causing bad feelings" (Santa Rita, E., 1979 b).

A basic concern for us was the degree of structure our program in contract negotiation would assume. After reviewing the literature on this issue, we were convinced that specific procedures should be included in our design. Following every contact, the students and their facilitators were to fill out contract forms that included target behaviors. A system of written pluses provided concrete feedback for follow-through and confirmation of completed task every week. It appears to be important for the student facilitators themselves to receive in supervision a great deal of motivating personal attention and positive feedback. Derived sources of satisfaction for the facilitators stem from "knowing I have helped someone make it who otherwise might have failed" (87%) and "experience in working that I can use as reference in later years " (78%).

Experimental Groups

The two control groups were the no-contact group and the no-treatment group. The two treatment groups were the study skills advise group and the peer-mediated self-contracting group.

1. Probationary Workshop Program (PWP) Group. The PWP group (F=11; M=7) is an academic survival counseling + study skills advice + stimulus control group. Treatment under these conditions included 3 sessions conducted by this counselor on academic survival skills (grade policies, index computation, course drop, withdrawal from college, use of tutoring and support services, etc.). Four sessions conducted by an instructor followed the effective study training guidelines described by Robinson (1970). The Robinson effective study training method includes the SQ3R (survey, question, read, recite, review) study techniques. In addition to receiving study organization and study behavior questionnaires, Ss in this group received handouts on taking notes and exam preparation, and general reading hints, all of which were culled from Jones (1969) and Robinson (1970). Examples of the study skills advice treatment, besides the SQ3R method included (a) "Always take notes at your lectures," (b) "In your

exams with matching questions, do the ones you are sure first, " (c) "Read your textbooks for comprehension, not speed." This group also received two handouts on stimulus control in addition to the study skills advice and questionnaires. The stimulus-control treatment included definitions of stimulus control and rules and examples for the application of stimulus control to modify study behaviors. Times, places and sources of distractions were the stimuli emphasized. Examples of stimulus-control suggestions included (a) "Do your studying at regular times and places," (b) Do not study where you sleep, e.g. in bed," (c) "Plan your study times and places so that distracting stimuli (like noise, loud music, TV, etc) are avoided," (d) "Slowly increase the amount of time that you study each day, until you reach the point where you are easily keeping up with all of your class assignments."

2. Operation Second Chance (OSC) Group. The OSC group (F=14; M=6) is an academic survival counseling + study skills advice + stimulus control + self-contracting peer-mediated group. Treatment under these conditions included all the instructions and handouts given to the PWP group. The self-contracting peer-mediated treatment involved there main operations: (a) a detailed explanation of the rationale of self-contracting behavior management procedures during two sessions of the initial interview period; (b) an evaluation of study time usage during an average week and work efficiency during study periods in relation to present and future academic status (suspension vs retention in college); (c) instruction and guidance in making self-contracts, including a determination of preferred goals and activities and the subsequent contractual reinforcement contingent on successful completion of targeted tasks. Six contracts were made by Ss from the 3rd to the 8th session. Contracts which served as self-monitoring records and graphs of successfully completed contracted tasks were returned to the student facilitators each week. Student facilitators "witnessed" by signing out completed contracts as "completed" or "in need of follow-through." Targeted tasks by categories and frequency distribution were: (a) Study Habits (13%), (b) Exam taking and Review Preparation (38%), (c) Tutoring (41%), and (d) Grade-Change Appeals & Course Drops (8%).

3. No-Contact Control (NCC) Group. The NCC group consisted of 20 students (F=11; M=9) who registered for but did not show up for the PWP session. They were never contacted.

4. No-Treatment Control (NTC) Group. The NTC group consisted of 16 students (F=11; M=5) who came late and were told that Operation Second Chance was fully booked and that, regretfully, they could not participate.

Outcome Measures

Evaluation interviews conducted at the conclusion of Operation Second Chance asked for general comments and evaluations of treatment conditions in Operation Second Chance. Most students replied yes to the question," Did the contracts helped increase the quality and quantity of your studying?" --88% replied yes, 12% replied no; $x^2(1) = 29.6$, $p < .001$. These same students replied yes to the question, " Did the student facilitators provide you with confidence and support in the week-to-week study tasks and academic goals?"--78% replied yes, 22% replied no; $x^2(1) = 28.8$, $p < .001$. While these perceptions and subjective appraisals would be of interest as outcome measures, they were considered as no more than corroborative support to the expected primary outcome measures of the study.

It was desirable to have had a pretreatment battery of Brown-Holtzman (1965) Survey of Study Habits and Attitudes, Form C (SSHA-C), Diagnostic Reading Test (DRT, Forma A) and some personality measures such as Rotter's Internal-External Locus of Control Scale (I-E Scale). We would have been able to apply a two-factor analysis of variance (Treatment by Pre-Post) for significant Pre-Post main effects (i.e. overall changes) on Work Method, Study Habits, Study Attitudes and Study Orientation. Also, treatment by Pre-Post interactions indicating differential changes associated with treament conditions would have been helpful. We were, thus, unable to make individual group comparisons which could have revealed the superiority of treatment groups over control groups on reported Work Method, Study Habits, Study Attitudes and Study Orientation of the students.

Attrition and Retention data were excluded from analysis; these data would reflect more variables (appeals procedures, administrative decisions, student decision to continue or discontinue, past academic performance pattern) than this design could account for. Similarly, the cumulative and degree-bearing GPA lines were not included in the post-treatment analysis. Again, the cumulative measures would tend more to obscure than isolate the treatment effects of the experiment.

We, therefore, decided to focus on a semester baseline and the movement in semester GPA, grade points earned and credits completed as the pre-and-post primary outcome measures of the project.

The major purposes of this study were to investigate whether college students could acquire academic survival skills and modify their study behaviors via a combinations of academic survivalcounseling + study skills advice + stimulus control techniques + peer-mediated self-contracting treatment conditions. It was predicted that academic survival skills could be acquired and study behavior could be modified and these outcomes would be reflected in improved semester GPA, grade points earned and number of credits completed and that the superiority on these outcome measures would be statistically significant for (a) PWP group $>$ NCC group, (b) the OSC group $>$ NTC group, (c) combined PWP + OSC groups $>$ the combined NCC + NTC groups, and (d) OSC group $>$ the PWP group.

Results

Means and standard deviations of grade-point averages, grade points and course credits completed before and after treatment for all groups are presented in Table 1. An analysis of grade-point averages failed to produce a significant pre-post main effect or Treatment by Pre-Post interaction effect. However, a comparison of the number of Ss in each group completing less than 10 credits following treatment via an exact probabilities test revealed that significantly more Ss in the NCC group fell below the ten credits mark than in groups OSC ($p < 0.02$) and PWP ($p < 0.01$). Similarly, significantly more Ss

in the NTC group fell below the ten credits mark than in groups OSC ($p < 0.02$) and PWP ($p < 0.01$). Group comparisons of the difference between Pre-Post changes in grade points earned were significant in the case of the PWP group vs the NCC group ($t = 2.03$, $df = 17$, $p < 0.05$) and group OSC vs NTC group ($t = 2.10$, $df = 17$, $p < 0.05$).

A comparison of combined treatment groups versus combined control groups found treatment groups signficantly better than the controls on outcome measures of grade points earned ($z(74) = 2.00$, $p < .03$, one-tailed test) and number of credits completed ($z(74) = 1.91$, $p < .03$, one-tailed test). However, the Newman-Keuls tests indicated that the treatment effects on measures of grade points earned and number of credits completed were not significantly different between the treatment groups of PWP and OSC.

The effectiveness associated with the PWP treatment conditions dovetails with previous research. Bednar and Weinberg's (1970) review of 23 experiments indicated that the effectiveness of study skills advice is largely reliant on four factors: (a) treatment length (more than 10 hours preferable), (b) structure, (c) volunteer students, and (d) individual counseling adjuncts. The present PWP treatment had had the advantages of maximal interpersonal contact and individual counseling as an adjunct to the traditional skills advice treatment case within behavioral language framework that included SQ3R and the stimulus-control procedures.

The effectiveness associated with the OSC treatment conditions suggests that the self-management procedure at the very least provide students with accurate feedback. Of course, information feedback is only one of the variables responsible for the effectivness of the OSC greatment procedure. Kazdin (1974) found that being obtrusively monitored by another person augmented reinforcement and heightend response desirability resulting in behavior change.

The fact, however, that directional analyses failed to discriminate significantly between the treatment groups OSC and PWP on outcome measures of grade points earned and number of credits completed may indicate that another important intervening variable could account for success of the treatment groups other than the procedures employed. It may well be that the initiative and motivation that led students to respond favorably to assistance also has significant positive effects on their academic performance. Conversely, the results may indicate that the lack of interest and lack of motivation to commit time and energy to study skills and counseling sessions may have resulted in performance deficits of students in both the NCC and NTC control groups.

TABLE 1. GROUP MEANS AND STANDARD DEVIATIONS OF GRADE DATA AND CREDITS COMPLETED

Group	Grade-point average				Grade points earned				% Ss completing less than ten course credits	
	Pre-		Post-		Pre-		Post-			
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	Pre-	Post-
OSC	2.04	0.58	2.31	0.63	27.6	14.5	32.9	11.3	20	10
PWP	2.31	0.57	2.64	0.57	34.1	12.2	40.8	8.2	23	11
NTC	2.25	0.87	2.22	0.98	25.4	7.8	20.6	12.9	22	56
NCC	2.17	0.74	2.12	0.93	28.8	11.2	28.1	14.5	11	34

It is more reasonable to asume that the willingness of the treatment groups of students to commit their time and energy to PWP and OSC sessions is at least partly an index of their motivation to succeed academically. This differential motivation may be one reason why in a number of group counseling studies in which underachievers have participated and in which the level of motivation was not initially assessed some of the participants progressed much faster academically than others in the identical program. Although the hypothesis that the respondent students have greater academic motivation than the nonrespondent students appears most reasonable in interpreting the present findings, possibly other factors beside motivation are involved.

For example, students who respond favorably to offers of assistance may have higher dependent needs than nonrespondent students and more quickly to turn to helping authorities when help is offered. Meeting their dependence in any way possibly increases their sense of security and allows the motivation they do have to be expressed more successfully in academic efforts.

Again the sample was not assessed on basic academic abilities. Perhaps the respondent students have greater academic potential than nonrespondent students and this difference in ability manifests itself in both a greater sense of "discrepancy" between what could be achieved academically and what is being achieved and a greater willingness to accept assistance.

Frequent criticisms have been directed at studies such as ours of the academic performance of students who voluntarily seek counseling and assistance. Such criticisms most often have been based upon assumed differences in motivation between these students and control groups matched with them only on aptitude or achievement variables. The question has been asked of how observed differences in performance can be attributed to the assistance and counseling received when instead they may have been due to an association with the variable which led the student to seek counseling and assistance. More specifically, the claim has been made that interpretation of the results of studies evaluating counseling assistance necessarily are inconclusive because level of motivation has not been one of the matching variables in the selection of the control groups. A logical analysis suggests this criticism may not be valid at all.

Discussion

Investigators and critics generally agree upon two basic assumptions. The first is that there is a positive relationship between "academic motivation" and academic success; the second is that there is a difference in "academic motivation" btween those students who volunarily seek assistance and those who

do not. There is no necessary identity of motivation in these two sets of relationships. However, it does seem most unlikely that they are negatively correlated. It is assumed here that the correlation between the two kinds of motivation falls somewhere within a range varying from independence to identity. If they are independent, that is, if motivation to seek counseling and assistance and motivation to improve academic performance are uncorrelated, then it no longer can be argued that an observed improvement in performance following counseling may be related to counseling assistance-seeking behavior. If, on the other hand, they are identical then the criticism must be met. This involves resolving a previously unrecognized contradiction which is described in detail below. The most probable event is that the two kinds of motivation have some less than a perfect positive correlation, particularly if we restrict our study to those students who seek assistance for vocational or educational problems. If this is so, then the criticism is only a slightly weaker than in the case of identity of the two kinds of academic motivation. Consequently, the situation in which identity is assumed will be discussed, with the explicit understanding that the same argument holds true whenever the relationship is positive.

From the first assumption of a relationship between motivation and success it can be inferred that if two individuals can be matched on <u>both</u> ability and achievement they have a similar level of academic motivation. However, from the second assumption of a difference in motivation between those students who voluntarily seek assistance and those who do not, if only one of these two individuals has sought assistance the <u>contradictory</u> inference of a difference in level of academic motivation must be drawn. Yet, this is precisely the design which has been recommended for studies of counseling effectiveness, with each counselee having a control matched at least on measures of achievement and aptitutde. How, then, can this difference be reconciled?

One resolution is to reject one or both the assumptions as false. If the first assumption of a relationship between motivation and success is rejected then the criticism that motivation differences between students who do and those who do not seek assistance can account for any later observed differences in academic performance is no longer appropriate. If the second assumption of a difference in motivation between those students who do and do not seek assistance is rejected, then the criticism disappears.

An alternative is to accept the correctness of the assumptions. This

implies that the contradiction is apparent rather than real and can be explained by the operation of an unidentified, confounding variable. That is, if a control subject is matched with each counselee on the basis of (at least) ability and achievement the motivation difference between them which led one to seek assistance is not being revealed in performance because of the nullifying effect of an inhibiting variable in terms of "lowered efficiency", which may take such varied forms as lack of awareness of options of behavior, or of availability of facilities and support services, or an inability to organize work and behavior in such a manner as to achieve the success of which the student is intellectually capable. Thus, with two students of equal aptitude but of different motivation it is possible to account for equal performance in terms of "lowered efficiency" interfering with the performance of the more highly motivated individual. If counseling and other forms of assistance is effective in dealing with the student's problem, "efficiency" should be improved enabling the student's higher motivation to manifest itself in objective performance criteria.

If this analysis is correct, then any improvement in performance following counseling may be attributed to an improvement in "efficiency," or to the countering of the effects of whatever is the unidentified inhibiting variable. This admits a motivation difference between students who voluntarily seek assistance and those who do not, but denies that this fact invalidates the findings of studies such as ours which have not matched on motivation.

Counseling Implications

In all the studies addressed to assessing the effectiveness of counseling, the question asked is "Does counseling affect academic performance?" The discussion above attempts to provide an answer to the different question of how. It does this by postulating in students who seek assistance the operation of an inhibiting variable which results in their aptitude and academic motivation not being expressed in entirely satisfactory performance. Academic assistance and counseling are successful if they counter the effect of the inhibiting variable.

There are a number of questions which arise from this explanation. How can the construct of "efficiency" be tested? Why does it work best for students who seek assistance of their own accord? Does it suggest changes which would result in more effective counseling of the underachieving students who do not spontaneously come to seek assistance?

In attempting to answer the above questions, it is necessary to identify the empirical referents of improved "efficiency" in terms, for example, of planning strategy, study habits, acquantance with a variety of possible occupational options, maturity of career and academic choices, awareness of and use of support services on campus, etc. Evidence for the hypothesis of improved "efficiency" can be provided by feedback from successful students who improved their grades because they improved their "efficiency" rating on such measures as study habits and study organization techniques, use of tutoring, change of curriculum, etc.

Voluntarily seeking assistance is an important variable. Our hypothesis suggests that inefficiency, at a conscious or unconscious level, is creating discomfort, imbalance and the felt need for redress. One possible reason why this is so is given in the various theories of cognitive dissonance (Festinger, 1957). In terms of Festinger's theory of cognitive dissonance, the individual seeks assistance because inefficiency and its results are producing dissonant cognitive elements. Seeking assistance is only one of several possible ways to attempt dissonance reduction. Once it has been chosen the counselee may improve her/his grades and change goals.

A prime outcome desired by the counselor is a change in behavior toward more efficient use of ability and motivation, resulting in improved performance. By temperament and training the counselor may find difficulty in manipulating the situation in such a way as to increase dissonance. Our general hypothesis may be the key to the general failure to improve grades among students who do and do not seek counseling assistance. A first step may be to arouse dissonance--"shocking" the students--before this discomfort can be reduced along guided channels. At some points an increase in dissonance may need to be induced before entrenched behavior can be altered in the desired direction.

Regardless of a difference in motivation or ability, the students in the treatment groups of PWP and OSC came to seek assistance because of a felt discomfort ("dissonance"). Our hypothesis goes on to suggest that these students attempted to improve their "efficiency" ratings to reduce the discomfort resulting in improved grade points earned and number of credit hours completed for the semester. The study indicates, therefore, the need for the student development staff to be more active and direct in their efforts to

create "dissonance" among large numbers of probationary students who do not respond to offers of counseling assistance. Perhaps direct contact is necessary for the nonrespondent probationary student, but certainly the continuing high rate of attrition among students justify every effort to alleviate the problem and ensure that students give themselves a "second chance."

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